

Remarks

Preliminary Matters

Claim 9 has been cancelled because of amendment adding that subject matter to Claim 1. Claims 10-20 have been cancelled because of the restriction requirement, made final. Claims 21 - 28 have been added to place objected, but allowable Claim 5 in independent form with dependents corresponding to Claims 2-4, 6-8, respectively. Computation now shows 2 independent claims and 16 total claims. No additional fees are required. If determined otherwise, the Office is authorized to charge Deposit Account No. 07-1077 for the amount.

Claim Objection of Claim 5

Applicants have taken Claim 5, rewritten it in independent form as new Claim 21 using the text of Claim 1 (as corrected for reasons of §112 addressed below). Applicants depend the subject matter of Claims 2-4 and 6-8 as new Claims 22-28, respectively. As presently understood, Claims 21-28 should be allowable.

Claim Rejections for § 112

Applicants amend Claims 1 and 5 to fix the indefiniteness of the ingredients of the polymer and the fiber used to make the claimed article. The same approach was taken in constructing new Claim 21. The claimed article comprises polymer and fiber, with both ingredients stated affirmatively and individually.

§ 102 Rejections

Applicants have overcome the rejection of Claims 1-4 and 9 using U.S. Pat. No. 6,821,599 (Kuroda et al.) under §102(e) by moving the subject matter of Claim 9 into Claim 1 and adding a lower limit of fiber content, with support for the amendment found at Page 5, Lines 14-21.

§103 Rejections

Applicants assert that Claims 6-8 (and Claims 1-4) are patentable over the

combination of Kuroda et al. and Applicants' assignee's product literature.

First, it must be understood that Kuroda et al. is trying to make **more porous** fabric fibers, whereas Applicants are trying to make **less porous** fiber-reinforced poly(vinyl chloride) articles that are made via profile extrusion.

Kuroda et al. teach in Table 1 and in the Abstract and throughout the text of the document that they are using hot water or steam *to make fibers more porous*. Table 1 shows the *rate of drop in specific gravity* of Examples 1-7 being superior to the rate of drop in specific gravity of Comparative Examples 1-4.

No one of ordinary skill in the art would want to make a product more porous and also add fiber strands to that product. Indeed, no one of ordinary skill in the art desiring to make their profile-extruded articles approach the near-perfection of "optimum specific gravity possible *without voids* for a given formulation of a polymer, as measured using ASTM Test D792"¹ would start with Kuroda et al. which is teaching in the opposite direction.

The Office is misled by Kuroda et al.'s use of the term "true specific gravity". Reading Table 1, it is clear that Kuroda et al. are identifying a starting specific gravity, then measuring the "specific gravity of the porosified fibers" after their desired water or steam treatment to yield a final specific gravity, the greater the reduction the better.

One skilled in the art would **not** be motivated to combine the teaching of Kuroda et al. with the technical product literature cited because Kuroda et al. are making porous fibers, whereas Applicants have invented an article via profile extrusion made of polymer and fiber that is almost perfectly *without voids*.

To quote from Page 3, Lines 13-17 of the specification,

One advantage of a profile-extruded poly(vinyl chloride) article having a "nearly unity" ratio is that the article has essentially no porosity throughout its mass and at its exposed surfaces. The resulting article is more desirable than conventional poly(vinyl chloride) articles because its exposed surface is smoother, its interior mass is more homogenous and contains much less voids.

¹ The quotation, with emphasis added, is of "theoretical specific gravity" from Page 2, Lines 28-30 of Applicants' specification. Please see the use of defined terms "theoretical specific gravity" and "actual specific gravity" in Claims 1 and 21, relying on their definitions on Page 2 of the specification.

10/772,213
Lee et al.
GAU: 1774 (N. Edwards)

If in doubt about the unexpectedness of the invention, a review is suggested of Applicants' application at Figs. 1-4 and Table 1 with explanatory text following in the paragraphs before the Claims.

Applicants' Claims 1-8 are patentable over the combination of Kuroda et al. and the technical literature from Applicants' Assignee.

If there are any matters that prevent a Notice of Allowance for Claims 1-8 and 21-28, the Examiner is invited to contact the undersigned by telephone.

Respectfully submitted by:

September 7, 2006
Date

John H. Hornickel
John H. Hornickel
Registration No. 29,393

PolyOne Corporation
33587 Walker Road
Avon Lake, Ohio 44012
Telephone: 440-930-3317
Fax: 440-930-1179
John.Hornickel@PolyOne.com